

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

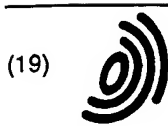
Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11)

EP 0 867 293 A3

(12)

EUROPEAN PATENT APPLICATION

(88) Date of publication A3:
25.11.1998 Bulletin 1998/48

(51) Int Cl.⁶: B41J 2/16, B41J 2/175

(43) Date of publication A2:
30.09.1998 Bulletin 1998/40

(21) Application number: 98302341.7

(22) Date of filing: 27.03.1998

(84) Designated Contracting States:
AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC
NL PT SE
Designated Extension States:
AL LT LV MK RO SI

- Surgener, Phyllis Curry
Lexington, Kentucky 40504 (US)
- Lowry, Edwina Floyd
Lexington, Kentucky 40513 (US)
- Jackson, Tonya Harris
Lexington, Kentucky 40514 (US)
- Haarz, Leea Danielle
Lexington, Kentucky 40503 (US)
- Derossett, William May, Jr.
Lexington, Kentucky 40505 (US)

(30) Priority: 27.03.1997 US 827140

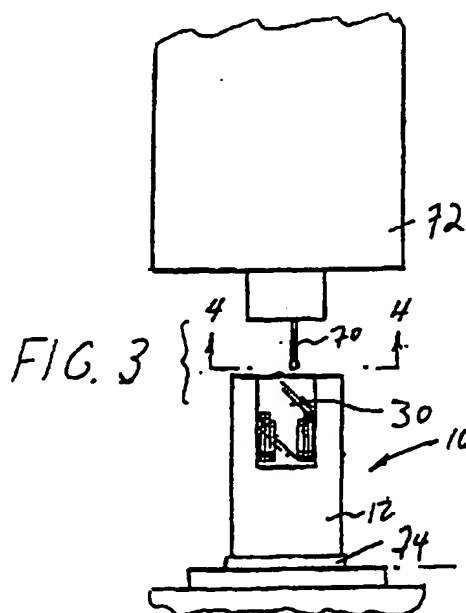
(71) Applicant: Lexmark International, Inc.
Lexington, Kentucky 40551 (US)

(72) Inventors:
• Singh, Jeanne Marle Saldanha
Lexington, Kentucky 40514 (US)
• Williams, Gary Raymond
Lexington, Kentucky 40517 (US)

(74) Representative: Tomlinson, Kerry John
Frank B. Dehn & Co.,
European Patent Attorneys,
179 Queen Victoria Street
London EC4V 4EL (GB)

(54) Process for joining a flexible circuit to a polymeric container and for forming a barrier layer over sections of the flexible circuit and other elements using an encapsulant material

(57) A method is provided for sealing at least one outer portion of an ink jet print cartridge (10). The method comprises the steps of providing a dispensing element (70) having an oval discharge orifice, and dispensing an encapsulant material onto the at least one outer portion via the dispensing element so as to provide a barrier layer over the at least one outer portion. Further provided is a process for joining a flexible circuit (30) to an ink jet print cartridge container (12). The method comprises the steps of applying a silane adhesion promoter to a portion of the container, applying an adhesive to at least a part of the silane-coated portion, and adhering the flexible circuit to the container via the adhesive.



EP 0 867 293 A3



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 98 30 2341

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
A	US 5 596 172 A (RASKIN GLENN D ET AL) 21 January 1997 * the whole document *	1,12,28	B41J2/16 B41J2/175
A	EP 0 705 703 A (HEWLETT PACKARD CO) 10 April 1996 * column 12, line 25-53 *	1,12,28	
A	US 5 334 245 A (HARTNETT MARY A ET AL) 2 August 1994 * abstract * * column 2, line 62 - column 3, line 7 * * column 3, line 50-63 *	1,12,28	
A	EP 0 713 778 A (LEXMARK INT INC) 29 May 1996 * column 2, line 45-57; figure 3 *	1,12,28	
A	EP 0 593 175 A (HEWLETT PACKARD CO) 20 April 1994 * abstract * * column 8, line 15-25; figure 9 *	1,12,28	TECHNICAL FIELDS SEARCHED (Int.Cl.8)
A	WO 96 31291 A (MOBIUM ENTERPRISES CORP) 10 October 1996 * page 2, paragraph 2 * * page 12, paragraph 1; figure 2B *	1	H01L B41J
Y	EP 0 705 706 A (HEWLETT PACKARD CO) 10 April 1996	19-23, 25,26, 32-36 28	
A	* the whole document *		
Y	EP 0 714 773 A (LEXMARK INT INC) 5 June 1996	19-23, 25,26, 32-36 28	
A	* the whole document *		
-/--			
The present search report has been drawn up for all claims			
Place of search BERLIN		Date of completion of the search 25 September 1998	Examiner Nielsen, M
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document			

EPO FORM 1503 03/82 (P04C01)



European Patent
Office

Application Number
EP 98 30 2341

CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing more than ten claims.

☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid, namely claim(s):

☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

☒ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.

☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:

☐ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 98 30 2341

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
A	EP 0 387 066 A (HITACHI CHEMICAL CO LTD) 12 September 1990 * abstract * * page 4, line 28-55 * * page 7, line 30 - page 9, line 46 * ---	19,22, 28,31,32	
A	EP 0 705 701 A (HEWLETT PACKARD CO) 10 April 1996 * column 15, line 22 - column 16, line 10 * -----	24,27	
			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
The present search report has been drawn up for all claims			
Place of search BERLIN		Date of completion of the search 25 September 1998	Examiner Nielsen, M
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</p>			

EPO FORM 1503 03.92 (Pct-Can)